



# AINV12002 Accident Phenomenology

## Term 1 - 2020

Profile information current as at 05/07/2022 05:36 pm

All details in this unit profile for AINV12002 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

### General Information

#### Overview

This unit will provide students with the basis for explaining the evolution of accident investigation methods and practice. On completion, students will be able to explain the characteristics, strengths and weaknesses of key theoretical accident causation models and apply the models to accident scenarios.

#### Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

There are no requisites for this unit.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

#### Offerings For Term 1 - 2020

- Adelaide
- Brisbane
- Bundaberg
- Gladstone
- Mackay
- Online
- Perth
- Rockhampton
- Sydney

#### Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

#### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Online Quiz(zes)**

Weighting: 10%

#### 2. **Written Assessment**

Weighting: 20%

#### 3. **Practical Assessment**

Weighting: 20%

#### 4. **Written Assessment**

Weighting: 50%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Have Your Say

##### Feedback

The Moodle layout was concise and easy to navigate.

##### Recommendation

Maintain the same Moodle presentation style.

#### Feedback from Have Your Say

##### Feedback

The feedback given from assignments was extremely detailed and constructive

##### Recommendation

Maintain the detailed assignment feedback.

#### Feedback from Have Your Say

##### Feedback

The assessment questions may benefit from more simple wording in order to assist with understanding the requirements

##### Recommendation

All assignments for this unit are being reviewed with respect to content and explanation.

## Unit Learning Outcomes

### On successful completion of this unit, you will be able to:

1. Analyse the evolution of accident investigation methods and practice.
2. Use accident causation models to establish accident causation factors.
3. Apply accident causation models to contemporary accident case studies.
4. Evaluate the application and effectiveness of accident causation models.
5. Employ effective communication strategies appropriate to accident phenomenology.
6. Demonstrate reflective skills appropriate to the development of the intermediate practitioner.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes					
	1	2	3	4	5	6
<b>1 - Online Quiz(zes) - 10%</b>					•	•
<b>2 - Written Assessment - 20%</b>	•				•	
<b>3 - Practical Assessment - 20%</b>		•	•			•
<b>4 - Written Assessment - 50%</b>	•	•	•	•	•	•

## Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
1 - Communication	•				•	
2 - Problem Solving		•	•			
3 - Critical Thinking		•	•	•		•
4 - Information Literacy	•	•	•	•	•	
5 - Team Work						
6 - Information Technology Competence	•			•	•	
7 - Cross Cultural Competence			•			
8 - Ethical practice		•	•			•
9 - Social Innovation						
10 - Aboriginal and Torres Strait Islander Cultures						

## Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Online Quiz(zes) - 10%	•		•	•		•		•		
2 - Written Assessment - 20%	•			•		•				
3 - Practical Assessment - 20%		•	•	•			•	•		
4 - Written Assessment - 50%	•	•	•	•		•	•	•		

## Textbooks and Resources

### Textbooks

There are no required textbooks.

### IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

## Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)  
For further information, see the Assessment Tasks.

## Teaching Contacts

**Sarah Munn** Unit Coordinator  
[s.munn@cqu.edu.au](mailto:s.munn@cqu.edu.au)

## Schedule

### Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: Introduction and Unit Overview	Readings will be available in Moodle	No tutorial

### Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: The Accident Phenomenon	Readings will be available in Moodle	Tutorial: Academic Life Skills

### Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: The Accident Phenomenon cont.	Readings will be available in Moodle	Tutorial: Discussing the accident phenomenon

### Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: Evolution of Accident Investigation and Prevention	Readings will be available in Moodle	Tutorial: Discussing the evolution and prevention of accidents <b>Online Quiz(zes)</b> Due: Week 4 Wednesday (1 Apr 2020) 10:00 am AEST

### Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: Heinrich's Domino Theory	Readings will be available in Moodle	No tutorial

### Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
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### Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: The Haddon Matrix	Watch the videolink provided in Moodle Readings will be available in Moodle	Tutorial: Applying Heinrich's Domino Theory to a real major accident <b>Accident Prevention Paper</b> Due: Week 6 Wednesday (22 Apr 2020) 10:00 am AEST

### Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Lecture: Reason's System Safety Management Model	Watch the videolink provided in Moodle Readings will be available in Moodle	Tutorial: Applying the Haddon Matrix to a real major accident

<b>Week 8 - 04 May 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Lecture: Viner's Extended Energy Damage Model and Time Sequence Model	Watch the videolink provided in Moodle Readings will be available in Moodle	Tutorial: Applying Reason's System Safety model to a real major accident
<b>Week 9 - 11 May 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Lecture: Learning from failure and corrective actions	Readings will be available in Moodle	Tutorial: Applying Viner's models to a real major accident <b>Theoretical Accident Causation Models</b> Due: Week 9 Friday (15 May 2020) 5:00 pm AEST
<b>Week 10 - 18 May 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Lecture: The Tapestry of Failure	Readings will be available in Moodle	Tutorial: NASA and the tapestry of failure (Challenger and Colombia)
<b>Week 11 - 25 May 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Lecture: Safety II and the Accident Phenomenon	Readings will be available in Moodle	No tutorial
<b>Week 12 - 01 Jun 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
Independent Study		No tutorial
<b>Review/Exam Week - 08 Jun 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>
		<b>Case Study Report</b> Due: Review/Exam Week Monday (8 June 2020) 9:00 am AEST
<b>Exam Week - 15 Jun 2020</b>		
<b>Module/Topic</b>	<b>Chapter</b>	<b>Events and Submissions/Topic</b>

## Assessment Tasks

### 1 Online Quiz(zes)

#### Assessment Type

Online Quiz(zes)

#### Task Description

You will be required to complete two online discussion quizzes in Moodle covering material related to the evolution of accident investigation methods and practice.

There is no additional submission requirement for this assessment as students' responses to the discussion quiz will be graded on line.

#### Number of Quizzes

2

#### Frequency of Quizzes

Other

#### Assessment Due Date

Week 4 Wednesday (1 Apr 2020) 10:00 am AEST

Both quizzes are due at this time

**Return Date to Students**

Week 5 Friday (10 Apr 2020)

**Weighting**

10%

**Minimum mark or grade**

To pass this unit students must attempt both quizzes and obtain an aggregate score of at least 50% for the unit overall.

**Assessment Criteria**

Grades will be applied based on the number of correct responses.

**Referencing Style**

- [Harvard \(author-date\)](#)

**Submission**

Online

**Submission Instructions**

Quiz responses to be submitted in the relevant area of Moodle

**Learning Outcomes Assessed**

- Employ effective communication strategies appropriate to accident phenomenology.
- Demonstrate reflective skills appropriate to the development of the intermediate practitioner.

**Graduate Attributes**

- Communication
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Ethical practice

## 2 Accident Prevention Paper

**Assessment Type**

Written Assessment

**Task Description**

You will write a short 'thinking' paper positing a point of view to describe why accidents are still occurring after more than 100 years of 'modern' approaches to accident prevention.

Your paper should be a maximum of 800 - 1000 words and your argument should be supported by a minimum of FOUR appropriate and reputable sources and citations from the literature.

A list of references used should be included at the end of your paper.

**This assessment may be written in the first person.**

**Assessment Due Date**

Week 6 Wednesday (22 Apr 2020) 10:00 am AEST

**Return Date to Students**

Two weeks following submission

**Weighting**

20%

**Minimum mark or grade**

Students must achieve a minimum grade of 50%.

**Assessment Criteria**

The following assessment criteria will apply:

1. Provides a viewpoint as to why accidents are still occurring after more than a 100 years of "modern" approaches to accident prevention and draws from the learnings covered in the unit
2. A logical argument is presented
3. Grammar and spelling are consistently accurate
4. References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment

A marking rubric containing detailed assessment criteria will be provided in the Moodle Unit.

### Referencing Style

- [Harvard \(author-date\)](#)

### Submission

Online

### Submission Instructions

Submissions will not be marked unless they are in a format compatible with Microsoft Word

### Learning Outcomes Assessed

- Analyse the evolution of accident investigation methods and practice.
- Employ effective communication strategies appropriate to accident phenomenology.

### Graduate Attributes

- Communication
- Information Literacy
- Information Technology Competence

## 3 Theoretical Accident Causation Models

### Assessment Type

Practical Assessment

### Task Description

This assessment task has three parts.

You will investigate the literature relating to **ONE** of the theoretical accident models and prepare a position paper.

### **Part A**

You will select **one** accident model from the following list:

Heinrich's Domino Theory  
Haddon Matrix  
Reason System Safety Management Model  
Time Sequence Model  
Extended Energy Damage Model

### **PART B**

From the list below, choose two elements:

- i. Technology
- ii. Systems
- iii. Human Factors
- iv. Social and organisational networks, including management and supervision
- v. Education & Training
- vi. Culture

Using the two elements, explore the literature and discuss the theoretical underpinnings of the chosen model in relation to its effectiveness in addressing failure.

### **PART C**

Discuss the model's guidance on:

- i) Establishing and validating corrective and remedial actions
- ii) Learning from failure

Your position paper should be limited to 2000 words maximum and be supported by relevant citations (minimum of 8) from the literature.

**Your paper MUST be written in the third person.**

### Assessment Due Date

Week 9 Friday (15 May 2020) 5:00 pm AEST



## Return Date to Students

Two weeks following submission

### Weighting

20%

### Minimum mark or grade

Students must achieve a minimum grade of 50%

### Assessment Criteria

The following assessment criteria will apply:

1. Explores the literature and discusses the theoretical underpinnings of the chosen model and its expected validity today
2. Discusses the effectiveness in addressing failures in two of the chosen elements
3. A logical argument is presented
4. Grammar and spelling are consistently accurate
5. References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment

A marking rubric containing detailed assessment criteria will be provided in the Moodle Unit.

### Referencing Style

- [Harvard \(author-date\)](#)

### Submission

Online

### Submission Instructions

Submissions will not be marked unless they are in a format compatible with Microsoft Word.

### Learning Outcomes Assessed

- Use accident causation models to establish accident causation factors.
- Apply accident causation models to contemporary accident case studies.
- Demonstrate reflective skills appropriate to the development of the intermediate practitioner.

### Graduate Attributes

- Problem Solving
- Critical Thinking
- Information Literacy
- Cross Cultural Competence
- Ethical practice

## 4 Case Study Report

### Assessment Type

Written Assessment

### Task Description

This assessment task has three parts.

In this assessment task you will use an accident case study provided by your lecturer (in Moodle) to evaluate the effectiveness of **TWO** selected theoretical accident causation models in explaining the failures which occurred in the case study.

### Part A

Select two theoretical accident models (**different to that chosen for Assessment Task three**) from the following list:

Heinrich's Domino Theory  
Haddon Matrix  
Reason System of Safety Management Model  
Time Sequence Model  
Extended Energy Damage Model

## **Part B**

Populate the models with the critical factors from the case study provided by the lecturer (in Moodle) to explain, in the language of the models, the failures which occurred in the accident. Templates will be made available in Moodle.

## **Part C**

You will then prepare a written report to explain:

- i) The reasons why the particular models were chosen
- ii) The key characteristics of the models
- iii) How well the models enabled explanation of the accident phenomena (The tapestry of failures which led to the accident)
- iv) The perceived strengths and weaknesses of the chosen models in describing the accident phenomenon

Your report should not exceed 3000 words. It should be supported by relevant citations (minimum of 10) from the literature.

**Your report MUST be written in the third person.**

### **Assessment Due Date**

Review/Exam Week Monday (8 June 2020) 9:00 am AEST

### **Return Date to Students**

Two weeks following submission

### **Weighting**

50%

### **Minimum mark or grade**

Students must achieve a minimum of 50%.

### **Assessment Criteria**

The following assessment criteria will apply:

1. Selects two theoretical accident models and populates them with both the critical factors from the case study provided by the lecturer and explains, in the language of the model, the failures which occurred in the accident
2. Evaluates how well the theoretical models enabled explanation of the accident phenomena in the case study
3. Report explains the reasons why the particular models were chosen, the key characteristics of the models, the tapestry of failures which led to the accident case study, as evidenced by the application of the chosen accident models; and the perceived strengths and weaknesses of the chosen models in describing the accident phenomenon
4. A logical argument is presented
5. Grammar and spelling are consistently accurate
6. References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment

A marking rubric containing detailed assessment criteria will be provided in the Moodle Unit.

### **Referencing Style**

- [Harvard \(author-date\)](#)

### **Submission**

Online

### **Submission Instructions**

Submissions will not be marked unless they are in a format compatible with Microsoft Word.

### **Learning Outcomes Assessed**

- Analyse the evolution of accident investigation methods and practice.
- Use accident causation models to establish accident causation factors.
- Apply accident causation models to contemporary accident case studies.
- Evaluate the application and effectiveness of accident causation models.
- Employ effective communication strategies appropriate to accident phenomenology.
- Demonstrate reflective skills appropriate to the development of the intermediate practitioner.

### **Graduate Attributes**

- Communication

- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### **What is a breach of academic integrity?**

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### **Why is academic integrity important?**

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### **Where can I get assistance?**

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### **What can you do to act with integrity?**



**Be Honest**

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



**Seek Help**

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



**Produce Original Work**

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem